

Appl. No. 10/021,250
Amendment dated: September 30, 2004
Reply to OA of: June 30, 2004

REMARKS

The present amendment is in response to the Office Action mailed June 30, 2004, in which claims 1 through 29 were rejected. Applicants have thoroughly reviewed the outstanding Office Action including the Examiner's remarks and the reference cited therein. The following remarks are believed to be fully responsive to the Office Action and, when coupled with the amendments made herein, are believed to render all claims at issue patentably distinguishable over the cited reference.

Claims 1-29 have been cancelled and new claims 30-43 are added to improve the clarity of the claimed subject matter and to bring the claims into conformity with U.S. practice and format, and to place the application fully in condition for allowance. All of the amendments are fully supported by the original disclosure of this application as would be understood by one of ordinary skill in the art to which the invention pertains and therefore do not constitute the introduction of any new matter into this case.

Claims 30-43 remain pending upon entry of the amendment to the claim above.

Applicant respectfully requests reconsideration in light of the above amendments and following remarks.

CLAIM REJECTIONS - 35 USC §102 (e)

With respect to paragraph 2 of the Office Action, the Examiner rejected claims 1-29 under 35 USC 102(e) as being anticipated by Yao et al. (U.S. Patent No. 6,192,939 B1). Applicant respectfully submits that claims 1-29 have been canceled and new claims 30-43 are added. The new claims 30-43 more definitely recite the claimed subject matter and are believed to be fully patentable over the cited prior art.

With respect to the anticipation rejection, Applicants wish to direct the Examiner's attention to MPEP § 2131 which states that to anticipate a claim, the reference must teach every element of the claim.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros.*

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v. *Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed.Cir. 1990).

Where in the reference is all of the limitations now set forth in the claims now present in the application?

With regard to the reference to Yao et al., the Examiner indicated that all structures of the apparatus provided in the claimed invention are not distinguishable from the pneumatic apparatus of Yao. et al.

The Examiner will note that the apparatus of Yao et al., as stated in claims 1, 6, 7, 8 and 9, characterized in that said air gallery is flat and comprises an air circle generating means to generate at least one air circle inside said air gallery adjacent to said fluid channel which is a fluid microflow channel. As stated in column 3, lines 55-57, in the reference to Yao et al., a trapezoid block is provided in the air gallery to generate an air circle from at least one of said airflows. Accordingly, a trapezoid block or an air circle generating means is necessary in the air gallery of the apparatus of Yao et al.

In contrast, the claimed apparatus does not require a trapezoid block or an air circle generating means in the air gallery. With regard to the claimed invention, the Examiner will note that new independent claim 30 positively recites the air gallery structure of the pneumatic microfluid driving system comprises a suction component for sucking out fluid on the micro-reaction module and an exclusion component for excluding fluid on the micro-reaction module; wherein said suction component comprises an air gallery for receiving airflow provided by said servo-device and a micro-channel for connecting said air gallery to introduce airflow; wherein said exclusion component comprises an air gallery for receiving airflow provided by said servo-device and a micro-channel for connecting said air gallery to channel airflow; wherein said air

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gallery of said suction component comprises a throat portion to generate a low pressure zone compared to said connecting channel and said air gallery of said exclusion component comprises an exclusion structure that guide at least a part of air flow blows into said connecting channel.

Therefore, it is respectfully submitted that the new independent claim 30 is patentably distinguishable over the apparatus of Yao et al.

Claims 31-39 directly or indirectly depend upon claim 30, each of which includes all limitations of claim 30. Thus, claims 31-39 are also patentably distinguishable over the apparatus of Yao et al.

In addition, with regard to the reference to Yao et al., as stated in column 5, line 13-37, the Examiner will note that the suction mode of Yao's apparatus is that a part of airflow 3 supplied into the air gallery 13 is retarded by the trapezoid block 15 and is forced to turn around, followed by generating an air circle 21 between the trapezoid block 15 and inlet 12 of the air gallery 13. This air circle 21 generates a speedy eddy current at the area of the open gap 16 whereby the air inside the fluid channel 17 is sucked to the air gallery 13 by bumping effect.

In contrast, with regard to the claimed invention, the Examiner will note that the suction mode of the claimed invention is that when airflow flowing through the throat portion that the sectional area of the suction air gallery becomes smaller, the velocity of airflow increases and a low pressure zone is formed at the throat portion due to the Bernoulli's equation, whereby the phenomenon of suction is created.

Therefore, the suction of the air gallery of Yao et al. is due to the bumping effect, but the suction of the claimed invention is due to the Bernoulli's equation. The Examiner will note that the distinct suction mode will lead to distinguishable structure design. Therefore, Applicant respectfully requests the Examiner to consider all the words of the new claims 30-39.

The Examiner also indicated that the device of Yao et al. is inherently perform the claimed process based on the reason that the structure recited in the reference of Yao et al. is substantially identical to that of the claimed invention. However, the original

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independent claim 25 has been cancelled, and new independent claim 40 is added. Applicant believes that, according to the reasons discussed above, structure of apparatus recited in the new claim 30-39 is not identical to that of Yao et al. As such, the method for driving fluid by using the apparatus recited in the new claim 30 are distinct from the method of Yao et al. Therefore, Applicant respectfully requests the Examiner to consider the patentability of the new method claims 40-43.

For the reason discussed above, Applicant respectfully requests the Examiner to consider the new independent claims 30 and 40, as well as the dependent claims 31-39, 41-43, in judging the patentability of the claims against the prior art, and withdrawal of the Examiner's rejection under 35 USC §102 (e) is respectfully requested.

CONCLUSION

In light of the above amendments and remarks, Applicant respectfully submits that the pending claims 30-43 as currently presented are in condition for allowance.

Favorable reconsideration is respectfully requested.

Respectfully submitted,

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